OBSERVATIONS ON BIRD-PLANT INTERACTIONS IN THE STIRLING RANGE

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INTRODUCTION

During May 1979 the author spent a week in the Stirling Ranges. Although the weather had been unseasonally dry very large numbers of Purple-crowned Lorikeets and New Holland Honeyeaters were present in the woodlands and heathlands respectively. Observations on these areas were carried out at various times of the day and are reported in detail below.

WOODLAND

Around the Stirling Range Caravan Park approximately one third of the *Eucalyptus occidentalis* Endl. trees were in full blossom in the Wandoo woodland. These trees were being visited by many hundreds of Purple-crowned Lorikeets which feed on these trees throughout the day. Generally birds visited 1-7 flowers per tree before moving on to another, generally in the same flowering clumps. A few Red Wattle-birds were also visiting this species and *Eucalyptus uncinata* Turcz (GK 2292) which was sparsely in flower.

MALLEE/HEATHLAND

Eucalyptus macrocera Turcz.

An extremely variable species. Plants on Mt Success and Bluff Knoll (GK 2304) are small mallees growing on rocky slopes, with only a few flowers per inflorescence (often with only one flower open per inflorescence). Plants at the base of Mt Talyuberup (GK 2320) are large trees or tree mallees with inflorescences containing many often green-yellow flowers looking superficially much like *Euc. lehmanniana*. In the mountain populations the few plants in flower were visited sporadically by New Holland Honeyeaters and Western Spinebills. The lowland populations contained very large numbers of New Holland Honeyeaters and Red Wattle-birds which fed continually in this clump throughout the day.

Banksia brownii Baxter

This species, a dominant of the area, was in full flower on Mt Hassell and Mt Success. Large numbers of New Holland Honeyeaters had set up feeding territories in both areas, and a considerable amount of intra-specific aggression was occurring between feeding and defending birds. Red Wattle-birds and Western Spinebills made rare sorties into the clumps to feed.

Muiriantha hassellii (F. Muell.) C. A. Gardn.

A small bell-flowered genus of Rutaceae endemic to the Stirlings, *Muiriantha*, was studied on Red Gum Hill and Mt Hassell. This species contained very little nectar and was only sporadically probed by New Holland Honeyeaters during observation periods. This species was, however, having a very poor season due to the dry conditions, and may be locally very common under favourable conditions. Further observations are needed.

Miscellaneous species:—

Lambertia uniflora R.Br. New Holland Honeyeaters and Western Spinebills probing flowers on Mt Success.

Lambertia ericifolia R.Br. New Hollands probing flowers on Red Gum Hill.

Astroloma microcalyx Sond. (GK 2338) Pair of New Hollands probing flowers on ground and in bush, pollen seen on bills; Red Gum Spring.

Adenanthos filifolia Benth. New Holland Honeyeaters probing flowers on Mt Success, Red Gum Hill.

Calothamnus sanguineus Labill. New Holland Honeyeaters probing, pollen on head, at Red Gum Springs.

Dryandra armata R.Br. (GK 2312) Probed by New Holland Honeyeaters, upper slopes Mt Success.

Dryandra cuneata R.Br. (GK 2333) Probed by a single New Holland Honeyeater, lower slopes Mt Success.

Grevillea aff *brownii* Meisn. (GK 2289) Western Spinebill, pollen on bill, Bluff Knoll.

Grevillea brownii Meisn. (GK 2337) Prostrate shrub, visited by single Singing Honeyeater, and a pair of New Hollands. Feed on ground 8 km East of the Porongurups.

Beaufortia anisandra Schau. (GK 2302) One New Holland probing, Mt Hassell.

Dryandra sessilis (Knight.) Domin (GK 2285) probed by pair of New Holland Honeyeaters, Red Gum Hill.

ANTS PROTECTING *BANKSIA* FLOWERS FROM DESTRUCTIVE INSECTS?

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ABSTRACT

A beneficial interaction between *Banksia media* and ants is suggested. Nectar produced from sites of insect damage on the immature conflorescence is thought to encourage ant patrolling of conflorescences and give protection against flower destroying insects.

INTRODUCTION

The confloreseence or flowering spike of *Banksia* is attacked by the larvae of Lepidoptera and Curculionidae. I have made observations on a

Fig. 1.—Immature *Banksia media* confloreseence with an unidentified ant species feeding on nectar produced at sites of insect damage.